Clinical Section

Clinical Staff Meeting
Winnipeg General Hospital

The Problem of Poliomyelitis

The regular clinical staff meeting at the Winnipeg General Hospital was held on September 21st, under the chairmanship of Dr. J. D. McQueen. Various aspects of poliomyelitis were discussed.

E. H. Alexander, M.D.: *The Use of Chemical Nasal Sprays for the Prevention of Poliomyelitis.*—It is generally accepted that the disease is caused by a highly neurotrophic virus in monkeys and most probably in man also. The virus reaches the central nervous system by way of the olfactory nerves. Complete section of both olfactory nerves in monkeys definitely prevents invasion of the central nervous system by the virus subsequently instilled intranasally.

So far as is known, the only portal of entry is through the olfactory cells which lie superficially in the olfactory mucosa, or the perineural spaces of the olfactory nerves. The present status of our knowledge of this disease indicates that the only real hope of bringing it under control lies in modifying the normal portal of entrance by some measure which will ensure or at least give temporary protection to the individual. The idea that certain chemicals applied to the nasal mucosa might in some way modify its spread seems to have occurred to four independent workers about the same time, Pette, Echoles and Richter of Ann Arbor, Michigan; Schultz and Gilbardt of Standford, California; Armstrong and Harrison of the National Institute of Health, Washington, and Sabin Oleskay and Cox at the Rockefeller Institute. All the investigations carried on so far have been performed on monkeys, and while we do not know that the virus acts the same way in humans as it does in monkeys, yet it is felt that the only way in which definite statistics can be obtained is to do careful field work on a series of humans in different parts of the country and compare and tabulate the results very carefully. In all, there have been about forty different combinations of chemical sprays tried, the most notable of which have been tannic acid 4%; picric acid and alum solution, and most recently, the one which is recommended at the present time a solution of zinc sulphate 1%, pontocine 1% in an isotonic saline solution. The technique of Pette is that the olfactory area be sprayed with a special atomizer using 1 c.c. of solution for each side and spraying this area once a day for three days and repeating once in two weeks in the hope that the height of any epidemic would be over and prophylaxis would be established. Zinc sulphate gives more lasting protection than the picric acid or tannic.

It has been noted that practically all people have very definite reactions in the form of coryza lasting from a few hours to two or three days; some headache, which in adults is quite severe and may persist from a few hours to two or three weeks; definite impairment, with some loss of the sense of smell, this also lasting as long as three weeks. Some children, of course, get nausea and vomiting from the zinc sulphate trickling down to the posterior nares and hence into the stomach.

I would suggest that it would be much more efficacious if all children were sprayed in the prone position, with the head held over the end of the table, the full amount of 1 c.c. covering the whole olfactory area and repeated every two weeks during the height of the epidemic. I would also suggest as my opinion that the proper time to use the prophylactic spray would be from mid July onwards before poliomyelitis reaches its height. I feel that this procedure is comparatively safe, and if it can be used properly and carefully tabulated, that it might be a means of preventing some child or adult from the terrible disabilities following poliomyelitis.

Gordon Chown, F.R.C.P. (C.): *The Diagnosis and Treatment of Anterior Poliomyelitis.*—I feel that the symptoms and treatment of anterior poliomyelitis might now be put in the hackneyed class. Surely everyone knows the true and early pre-paralytic signs. Thinking it over, I thought I might give you a history of two cases, both of which I saw Friday, September 10, 1937.

The first case was a girl, 9 years of age. She had been at school on Wednesday. She wakened on Thursday morning complaining of muscle pains in her legs, and remained in bed. The next morning she complained of a slight headache and still complained of pain in her legs. She had not vomited. I saw her at eleven o'clock on Friday. On examining the child she had an expression of fear on her face, a thing one learns to recognize. Neck, although not rigid, was stiff. The spine was stiff and she could not touch her toes on stretching forward without complaining of pain. Knee jerks hyperactive. Her temperature was 102°, and I was certain the diagnosis was poliomyelitis. I put her in my car and took her to the Children's Hospital. I did a lumbar puncture, and examination of the cerebro-spinal fluid showed: cells 170; 20 m.m. pressure mercury and positive globulin. She was transferred to the King George Hospital and received 20 c.c's. of serum, intramuscularly. The following morning the neck rigidity had gone, also her other symptoms, and she was feeling perfectly well. Temperature 100°. She has not developed paralysis.

The other case was a boy, 9 years of age. He was brought home from school during the morning, screaming with a headache. I saw him shortly afterwards; his temperature was 102°, and his headache was intense. He had vomited twice. Other pre-paralytic signs were lacking.

I made a diagnosis of intestinal intoxication. I gave him a high enema, which produced a foul-smelling stool. The child's headache persisted and temperature went up to 103, but during the night, he had five loose, foul stools, with considerable mucus. Next morning the headache had gone, temperature down and the child was well, except for his diarrohoea.

The King George Hospital have admitted 32 definite cases to date, and 57 suspects. Last year, from my analysis of the cases admitted on an average, every third case came in with headache, vomiting and temperature. They all have lumbar punctures. The suspects are retained in hospital for a period of anywhere from five days to two weeks. Think of the daily anxiety of the parents whose child has been classified as a suspect! The parents or the taxpayer bears the expense of maintaining these patients in hospital.

If we remember the pre-paralytic signs as illustrated in the first case, we should be able to make more accurate diagnosis.

As confirmatory of the diagnosis, I feel that the lumbar punctures if necessary could be done in the home, or at one of the hospitals in the out-patient department. Such facilities are available at the Children's Hospital at present.

Should the spinal fluid give negative findings, the child could be admitted to the hospital for observation, or better returned home for further observation by the family physician.

In this connection, it is interesting to study the statistics of the Herman Heiffer Hospital, Detroit. From 1927-1935, there were 790 cases admitted as suspect poliomyelitis. In the final diagnosis of these cases, 445 were diagnosed as poliomyelitis.

Some of the diagnosis of the remaining cases are as follows:—

Nasopharyngitis 74, Influenza 26, Tb. Meningitis 19, Acute Rheumatic Fever 19, Meningitis 17, Marasmus 2, Acute Gastro-Enteritis 16, Lobar Pneumonia 12, Broncho Pneumonia 10, Rickets 2, etc.

With nearly twice as many suspects as real cases being sent to the King George Hospital, I feel that it does not speak very well for the diagnostic acumen of the medical profession.

The only explanation that I can give is that Physicians have their "wind up" as well as the parents, and are very pleased to be able to pass the responsibilities of diagnosis on to the King George Hospital.

If I had referred my patients in the past month with headache, vomiting and temperature to the King George Hospital for diagnosis, at least forty more could have been added to the list of suspects.

The history and signs in a positive case of poliomyelitis are so definite, that the diagnosis is, and should be, a simple matter.

As to the treatment, Park and his associates of New York, doubt the value of serum treatment, but here, on a positive diagnosis, 20 c.c.s. of serum are at once administered intra-muscularly. The patient is placed at absolute rest in bed for a period of two weeks. If no paralysis has developed, the patient is allowed to gradually resume normal activities.

Angus Murray, F.R.C.S. (C.): *The Prevention of Deformities in Anterior Poliomyelitis.*—It might well be asked how one who has not been able to prevent deformities in all of his own cases of anterior poliomyelitis should undertake to tell other doctors how to prevent such deformities in their patients.

There are several reasons why we are not always able to prevent deformities in this disease. However, let us first of all confess our own sins of omission and frankly state that we have not always, even when we had the opportunity to do so, given these patients the study and supervision which their importance demands.

In the acute stage of the disease patients are often times allowed to lie in bed in any position they wish. It may be for one, two or more months. During this time the patient may easily develop deformities which are very difficult to correct. Therefore, we should see to it that the prevention of deformities should form an important part of treatment in the acute stage of the disease. Again we may be unable to do our best for these patients owing to lack of co-operation on their part, or, in the case of children, on the part of their parents. Then again distance, and the difficulty and cost of transportation are factors which militate against us. For example, sometime ago, I examined a patient who had come into town by aeroplane and went back the same way at a cost of $50.00 the round trip. Obviously it is impossible for people in ordinary circumstances to be properly cared for under such conditions. Then, too, people are often times careless about having anything done after the acute stage is over. They may be unable to bear the cost, or are afraid of anaesthetics and manipulative or cutting operations. Many people are easily discouraged at the slowness of recovery and are apt to take unwise advice and go from one practitioner to another for any kind of treatment that is suggested, good or bad, until their financial resources are exhausted.

There is no use in discussing ideal conditions under which to treat these patients because sufficient money to carry out those ideas is not available. However, given the opportunity to do what we can under ordinary circumstances, what should we do? It should be laid down, and this is recognized by everybody, that Rest is the factor par excellence that we should make use of in the prevention of deformities. This form of treatment is not only the best but it is the cheapest. Many patients are much better treated in their own homes than in hospitals. Moreover this is much less burdensome to the taxpayer.

First we should provide these patients with a good comfortable bed. A firm bed is an excellent one for cases in the acute or subacute stage. One can always provide this by placing boards between the spring and mattress. This should be looked after by the doctor himself and not left to parents or nurses. The head of the bed should be raised so that the patient can observe what is going on around him. This will help to keep him contented. Raising the head of the bed also helps to keep the patient clean which is an aid in preventing bed sores. Part of the time the patient should be kept in the straight position on the bed because in the case of paralysis of the trunk muscles this will help to keep the spine straight and prevent the development of scoliosis. The arm can be kept abducted at the shoulder joint by tying the limb to the head of the bed and supporting it comfortably with pillows. The knees should not be kept in the straight position but flexed on a pillow or firm support. Foot drop can be prevented by placing a board or a box at the foot of the bed, up against which the patient can place his feet and so keep them at right angles to the legs. Patients should be turned frequently from side to side in order to give them rest. Paralyzed muscles should be kept in the neutral position. What many people understand by rest is that the patient should be kept in the straight position in bed and not moved. If this is done the joints sometimes get so stiff that a fair range of movement cannot be obtained. I have seen two patients whose lower limbs had been kept in the straight position for so long that they were unable to bend the hip or knee joints and so far as I know those joints are in that condition still. Limbs which are difficult to keep in the proper position should be fitted with splints or in the more difficult cases with plaster dressings.

A word about massage. My observation of those patients who have had a great deal of massage and those who have had none, rightly or wrongly, leads me to the conclusion that massage should not be given until two, three or in some cases four months have elapsed since the onset of the illness. Massage when it is given should be light. Muscle re-education and coaxing the patient to do all that he can for himself is more helpful than passive exercise.

X-ray, treatment by electrical appliances, and costly life-saving machines of one kind or another are to say the least, of doubtful value. The prevention of deformities during the residual stage of paralysis does not come within the purview of this note.

F. W. Jackson, D.P.H.: *Condition of Affairs in the Province.*–This year up to this date in Manitoba we have had 155 cases of Infantile Paralysis as compared with 180 up to the same date last year. We have distributed already this year more serum during the same period than last year. With only 155 cases reported there has been distributed 400 vials of serum. We would very much like to know what has happened to the serum. I would urge all practitioners when they use the serum to return the form which accompanies it, properly filled out, to Dr. Cadham at the Provincial Laboratory.

We have had several enquiries as to whether serum is distributed for prophylaxis. I think you must all realize that it would be utterly impossible to do this even if we knew it was of any great value as a prophylactic. I would like to emphasize one or two things mentioned by the previous speakers. First, prevention by use of the spray. I quite agree with Dr. E. H. Alexander that any experiment of this nature to give worth while statistics should be commenced before the individuals in the group were exposed to infection. In Transcona it will be of no value, as the work started too late. The spray should have been started before the epidemic broke out. In reference to Dr. Chown's remarks, I think that there should not be any great difficulty in recognizing cases of poliomyelitis. The symptoms are more or less, as Dr. Chown has said, classic. Despite that fact, we would far sooner see the doctor send a patient to the King George Hospital as a suspect rather than run the risk on missing a case.

With regard to spinal fluid examination, we found last year six cases of residual paralysis and one death where the spinal fluid findings were negative.

Dr. Murray has pointed out the great difficulty in getting people to take advantage of the opportunities for the proper treatment of residual paralysis and I agree with him that if parents would make an effort the desired treatment could be obtained.

Bruce Chown, M.D.: *The Value of the Nasal Spray.*—As Dr. Alexander pointed out, nasal spraying is purely experimental. It prevents Poliomyelitis in monkeys, but has never been proven to prevent it in man. It is a question whether the disease in monkeys is the same as that in man. Certain facts make it doubtful.

First, only those monkeys are immune which have been paralyzed. Are we to believe that this is true of man?

Second, the route of infection, according to animal experiments is by way of the nerve endings of the olfactory nerves, thence by devious routes through the brain and finally down the spinal cord. If that is the route invariably followed in man, it is a very curious thing that the lumbar region is most often involved, and lower limb paralysis much more common than upper.

Third, when vaccines were used for prevention, the U.S. Public Health authorities reported twelve cases in children, considered to be due to the vaccines. In these children the paralysis was first in the limb into which the vaccine was injected. If this is true, it is an important observation against the nasal route being the invariable route of infection.

Another point about the spray is the question of age. We do not know where to draw the line. In the more recent epidemics, more and more cases in the older age groups have been reported. In the epidemic of 1934 in Denmark, and in the one last year in California, more than one-third of the patients were over twenty years of age.

Dr. Gordon Chown has emphasized the value of clinical diagnosis. Let me confirm his opinion by pointing out a serious hiatus in laboratory diagnosis. Of the 4,500 cases in Denmark in 1934, not less than 36.1% had a normal spinal fluid on the single examination carried out. Clinical diagnosis still remains our best method.

Special Articles and Association Notes

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Minutes of Executive Meeting

Minutes of a meeting of the retiring executive and the executive elect of the Manitoba Medical Association held in the Medical Arts Club on Thursday, September 2nd, 1937, at 6.30 p.m.

Present.

Dr. Geo. Clingan	Dr. W. S. Peters
Dr. E. S. Moorhead	Dr. W. G. Campbell
Dr. F. W. Jackson	Dr. S. G. Herbert
Dr. Digby Wheeler	Dr. E. K. Cunningham
Dr. C. W. Burns	Dr. E. L. Ross
Dr. W. E. R. Coad	Dr. P. H. T. Thorlakson.

Following dinner, the meeting was called to order by the President and the minutes of the last executive meeting held on May 19th, were read by the secretary.

Retirement of Secretary.

Discussion arose regarding the date of retirement of Dr. F. W. Jackson as Secretary, Dr. Clingan stating that it was his understanding that on page 0511 of the minutes of the report of executive officer, the words "at the end of the financial year" should be deleted and instead thereof there be inserted "when the incoming executive takes office." Following further discussion, it was moved by Dr. E. S. Moorhead, seconded by Dr. Geo. Clingan: That this correction in the minutes be made. This was done and correction initialed by the President, and the minutes approved and signed.

Dr. Geo. Clingan, retiring president, then expressed appreciation to the members for their support during the past year during his term of Presidency, and turned the business of the meeting over to the new President, Dr. C. W. Burns, who replied to Dr. Clingan's remarks.

In the absence of the Secretary, Dr. C. W. MacCharles, Dr. Jackson was appointed Secretary for the meeting.

Business Arising out of the Minutes.

Resolution No. 10 from the Winnipeg General Hospital. The Secretary read resolution No. 10 which was presented at the last meeting of the executive with respect to patients being admitted from the various municipalities to the public wards of the City Hospitals, irrespective of the patients' financial status, and advised that this resolution had been left for the incoming executive to deal with.

Following full discussion it was decided that this matter was one which should be dealt with by the Department of Health.

It was moved by Dr. P. H. T. Thorlakson, seconded by Dr. Digby Wheeler: That a request be forwarded to the Minister of Health setting out this resolution and pointing out that in as much as this affected the Health Officers throughout the Province, that he be asked to send a letter to all the Reeves, Secretaries and Health Officers of the various Municipalities, outlining the position to them. —Carried.

It was suggested that a letter be sent by the Secretary to the Manitoba Hospital Association stating the action of this executive regarding this resolution.

Re. Dr. Strong's Letter.

An interim report of the committee appointed to interview Dr. Strong was made by Dr. Burns, who stated that a further report would be made at the next meeting.

Remuneration for Incoming Secretary.

As Dr. C. W. MacCharles was unavoidably absent from this meeting attending a meeting of the Medical Council of Canada, it was suggested that this matter be left over until the next executive meeting when a larger attendance of the executive is expected.

Signing Officers.

Moved by Dr. Geo. Clingan, seconded by Dr. W. E. R. Coad: That the signing officers of the Association for the ensuing year shall be as follows: Dr. C. W. Burns, President; Dr. C. W. MacCharles, Secretary; or either; with Dr. Digby Wheeler, Treasurer.

Appointment of Standing Committees.

Standing Committees for the ensuing year were duly appointed as follows:—

Legislative Committee:

Dr. G. S. Fahrni, Chairman, Dr. C. R. Rice, Dr. S. G. Herbert.

Radio Committee:

Dr. R. W. Richardson, Convener.

Committee on Historical Medicine and Necrology:

Dr. Ross B. Mitchell, Convener.

Committee on Maternal Mortality:

Dr. J. D. McQueen, Convener.

Editorial Board of C.M.A. Journal:

Dr. Ross B. Mitchell, Dr. E. S. Moorhead, Dr. C. W. MacCharles.

Committee on Sociology:

Dr. E. S. Moorhead, Chairman.

Workmen's Compensation Referee Board:

Dr. W. Chestnut, Chairman.

Representative to Manitoba Sanatorium Board:

Dr. B. H. Olson.

Auditors:

Dr. F. G. McGuinness and Dr. H. D. Kitchen.

Editorial Committee:

The appointment of Editor of the *Review* was discussed and it was pointed out that Dr. C. W. MacCharles, the former Editor, was now Secretary of the Association, and that the two appointments involved a great deal of work. It was emphasized, however, that Dr. MacCharles was so familiar with the work that it would be an advantage if he carried on as Editor, and that the members of the Editorial Committee could lend their assistance.

It was moved by Dr. Moorhead, and duly seconded, and passed, that the Editorial Committee be as follows:

Dr. C. W. MacCharles, Chairman, Dr. Ross B. Mitchell and Dr. P. H. T. Thorlakson.

—Carried.

Appointment of Official Delegates to C.M.A. Council.

Dr. C. W. Burns, President, Dr. C. W. MacCharles, Secretary, Dr. W. S. Peters, Dr. F. D. McKenty, Dr. G. S. Fahrni, Dr. P. H. T. Thorlakson, Dr. M. R. MacCharles, Dr. T. E. Holland, Dr. E. S. Moorhead.

Annual Meeting.

Dr. Thorlakson brought up the question of the date of the Annual Meeting. Dr. Burns suggested that consideration should be given to re-establishing the anuual meeting in September in view of the fact that by doing this we would be able to get assistance on the programme from the travelling team of the Canadian Medical Association. Considerable amount of discussion took place and it was suggested that the Secretary get in touch with the Secretaries of the District Medical Societies and ascertain the preference on the part of members of the District Societies. Drs. Clingan and Peters were requested to bring this question up at the conjoint meeting of the Western and Brandon Medical Societies, which is being held at Clear Lake on September 8th.

Correspondence.

Letter was read from Dr. F. A. Young asking that steps be taken to put before the Government a request for the consideration of allowing expenses for sickness and accident as an exemption from income taxes. Following full discussion, it was moved by Dr. P. H. T. Thorlakson, seconded by Dr. E. S. Moorhead: That this be referred to the Legislative Committee for further study and consideration. —Carried.

Letter was read from Mrs. R. F. McWilliams, Chairman of the Committee on Health of the City of Winnipeg, dated June 9th, 1937, with reference to letter from Dr. Gordon Chown in May.

It was moved by Dr. Digby Wheeler, seconded by Dr. S. G. Herbert: That a copy of Mrs. McWilliams' letter be sent to Dr. Chown, and that we await his instructions. —Carried.

Letter was read from Mr. R. J. Parker, Secretary of The Western Canada Insurance Underwriters' Association, in which a detailed statement of an account for medical attendance had been requested; the principle involved being the indemnity under a policy that is limited. Dr. Jackson reviewed the file of correspondence in question and advised that he had arranged for a committee of The Western Canada Insurance Underwriters' Association to attend this meeting, but that he had just received a telephone call stating that they were dropping the whole matter.

Letter was read from The College of Physicians and Surgeons under date of June 3rd, regarding complaint received from a rural practitioner. Dr. Campbell advised that the matter had been dealt with by The College of Physicians and Surgeons and the letter was ordered filed.

Letter was read from Dr. M. R. MacCharles under date of July 3rd, advising that the Cancer Relief and Research Institute have been able to arrange for the transportation of indigent patients to and from treatment centers, and further advised that the Institute were of the opinion that it would be advisable to ask the staff of the Brandon General Hospital to establish a Tumor Clinic in their hospital. Dr. MacCharles being the representative of this Association on the Cancer Board, wished advice on the matter. This question was fully discussed by the executive committee and it was moved by Dr. S. G. Herbert, seconded by Dr. P. H. T. Thorlakson: That this executive is in sympathy with the establishment of a Tumor Clinic in the Brandon General Hospital, and we suggest that The Cancer Relief and Research Institute take the matter of the forma-

tion of a Tumor Clinic in Brandon up directly with the medical staff of the Brandon General Hospital. —Carried.

Letter from the Canadian Medical Association under date of July 13th, enclosing copy of resolution passed at their recent annual meeting in Ottawa regarding the pasteurization of milk, was read.

Following discussion it was moved by Dr. E. S. Moorhead, seconded by Dr. Geo. Clingan: That this resolution be referred to the Winnipeg Medical Society. —Carried.

Report of Representative on Executive Committee of Canadian Medical Association.

A meeting the Executive Committee was held in Ottawa on June 18th and 19th. The following items are taken from the agenda as being of interest to the Executive of the Manitoba Medical Association.

(1) An effort is being made to bring out two persons of distinction from England yearly to the Annual Meeting of the Canadian Medical Association. At this meeting Sir Harold Whitehouse and Mr. Watson Jones were present, also Prof. Lacassagne from Paris. Final arrangements to make this an annual affair are not yet completed.

(2) With regard to Specialists: The disposition of this is contained in the minutes of the Executive and Council Meetings. The Royal College of Surgeons and the Royal College of Physicians of Canada are to arrange for degrees in the various specialties.

(3) A Royal Commission was discussed to deal with the question of medical economics, and no resolution was passed.

(4) The question of medical relief arising out of the letter from the Manitoba Medical Association with regard to the Pipestone area was discussed very fully. A committee, of which your representative was Chairman, was appointed to prepare a resolution, copy of which follows. This resolution was passed by the Executive Committee and Council.

> WHEREAS the Honourable the Federal Minister of Finance has stated that Federal Relief Funds cannot be used for the provision of medical care, and it is held that, under the British North America Act this care should be provided by the Provinces; and
>
> WHEREAS certain provinces, particularly those with drought areas, maintain that, even with federal assistance for other forms of relief, they are unable to provide medical care, and insist further that this care is a municipal obligation; and
>
> WHEREAS the federal and provincial governments are leaving this care wholly or in part to municipalities which have no funds and have thus placed the burden upon doctors who, in many instances, have no other source of livelihood;
>
> BE IT RESOLVED—
>
> (1) THAT, in the provision of assistance to provinces in connection with their relief programs, the Federal Government should, without further delay, recognize medical relief as of equal importance with the provision of shelter, food, fuel and clothing; and furthermore,
>
> (2) THAT the relief of the suffering of people is of more importance than the maintenance of a doubtful legal position and must be provided by that section of the Government which is best able to do so.

(5) The question of disagreement between Ontario and Manitoba over the institution of the medical relief scheme for unemployed was placed on the agenda. I explained to the executive that I did not consider that it was anything in which the executive should be asked to express an opinion, and few members of the executive took part in the discussion.

Cancer.

The disposition of the question of cancer is fully reported in the minutes. A board composed of laymen and medical men is to be set up to control the money available from the King George V. Cancer Relief Fund.

Membership.

New Brunswick feels time is not ripe to make a drive for membership. Nova Scotia has now procured 236 of the promised 250 members. Ontario has 1,660 where they promised 1,500.

Ontario and Nova Scotia will only pay to the Canadian Medical Association whatever sums it collects from its members at $8.00 per head. It appears that this will have to be the arrangement with all Provinces for the future.

Federation.

This question was discussed very fully both at the Executive and Council meetings. At the latter Dr. F. D. McKenty spoke and this is reported in the minutes of the Council meeting.

The sum of $25.00 was paid for secretarial assistance for the Committee on Ethics in preparation of the code of ethics.

More than a year ago when your representative brought up the question of holding executive meetings occasionally in Winnipeg, he pointed out that this would entail an increased cost of more than $1,000 and would therefore be unwise. The question was again raised but not by your representative, and the General Secretary made the statement that he thought it might be good policy to have meetings occasionally in the west. The meeting of the Canadian Medical Association in 1938 will be held in Halifax; it is proposed to hold the 1939 meeting in Toronto, and the 1940 meeting in Winnipeg.

Following report of Dr. Moorhead on the last Executive meeting of the Canadian Medical Association Executive meeting, Dr. Thorlakson made the suggestion that Dr. Moorhead's reports were of such importance that they should be mimeographed well in advance of the Executive meeting and send to all members of the Executive, so that the matter contained therein could be intelligently discussed.

Obituary

DR. A. BOAK ALEXANDER

A. Boak Alexander, M.D., died in the Winnipeg General Hospital September 3rd, less than four months after he had retired as Medical Superintendent of the Municipal Hospitals. He was born in Nova Scotia in 1872 and received part of his education in Dalhousie University at Halifax. In 1889 he came to Winnipeg, graduated in Arts from the Manitoba College in 1893 and in medicine from the Manitoba Medical College in 1897. He practised for ten years in Killarney, then returned to Winnipeg where he engaged in private practice until 1911, when he became Superintendent of the City Hospitals.

At that time the Municipal Hospitals consisted of two frame buildings, one on Bannatyne and one at the present site at the foot of Morley Avenue. In the intervening years the hospitals have been combined on the Morley Avenue site and have grown to the present large institution. The Municipal Hospitals have received the Grade A grading of the American College of Surgeons.

Dr. Alexander was an active curler, golfer and bird shot.

His wife died some years ago, and he is survived by two sons and a daughter.

DR. R. B. POZER

Dr. R. B. Pozer of Ericksdale, Manitoba, and his young son were killed in a motor collision near Duluth, Minnesota, U.S.A., on August 28th. His wife was injured but the other occupant of the car, his nephew, escaped without mishap.

While a student at the University, Bruce Pozer enlisted in the Canadian Expeditionary Force and served in France attached to the 27th Canadian Infantry Battalion. He was decorated with the Military Medal. After demobilization he resumed his University work and graduated in Medicine from the University of Manitoba in 1923.

For the past twelve years Dr. Pozer carried on a general country practice at Ericksdale, Manitoba, doing a vast amount of work cheerfully and in many instances without remuneration. The affectionate regard in which he was held in the community was demonstrated at a special service in his memory held at the Ericksdale United Church.

With his passing many lost a true friend, the community a faithful servant, and the profession an example of the finest type of practitioner.

NOTICE

FACULTY OF MEDICINE

A Post-Graduate Course

ON

THE PSYCHOLOGICAL ASPECTS OF MEDICINE

will be held during the winter each Wednesday, at 8.30 p.m., commencing November 10th, for approximately 15 weeks.

TENTATIVE LIST OF SUBJECTS

1. General Introduction:
   The Need-The Plan.
2. Some Psychological Concepts.
3. The Entire Personality.
4. Psychopathology:
   Psychopathological Mechanisms.
   Pschopathology of Symptoms.
   Schools of Psychopathology.
5. The Psychoneuroses.
6. The Commoner Psychoses.
7. Some Problems of Childhood.
8. Doctors and Patients.
9. Psychology and the Surgeon.
10. Medico-Legal Problems.

REGISTRATION CLOSES ON NOVEMBER 1st

FEE: $15.00

Please address communications to Secretary of Post-graduate Committee, Medical College.

A Post-Graduate Course

ON

TRAUMATIC SURGERY

will be arranged for the last week in February or the first week in March. The course will last four days.

A further announcement will be made in the next number of the *Review*.

Department of Health and Public Welfare

NEWS ITEMS

MATERNAL MORTALITY: The following is an article published by the New York Academy of Medicine in their August, 1937 publication, and was prepared by Doctor Harry Aranow:

The science of obstetrics has made remarkable strides during the last half a century. Causes of sepsis have been thoroughly studied. The theory and practice of asepsis has been fully developed. The toxemias of pregnancy have been investigated and classified. Pelvic anomalies and fetal disproportion have been rendered easier of recognition by x-ray studies. The technique of forceps, version and Caesarean section have been perfected. Transfusion has made the care of hemorrhage complicating pregnancy less formidable. But—*the maternal mortality rate has remained the same.*

During the last ten years a number of studies have been undertaken to determine the chief (prevailing) cause of maternal mortality and to what extent maternal deaths may be prevented. The report of the Public Health Relations Committee of the New York Academy of Medicine has been accepted throughout this country and abroad as one of the best. In that report the conclusions that 65.8 per cent of the deaths studied were preventable* were arrived at after a careful study and check-up, because the results of that study were as much of a surprise to the members of the committee making the study as they were to the general medical profession. Since the Academy report a number of similar studies were made at Philadelphia, Boston, Washington and a number of other cities, with similar results.

Even when the term "preventable" was restricted and narrowed the percentage of preventability was not lowered to any extent. The Philadelphia report† states: "In determining this theoretical preventability of deaths the Analysis Committee felt that the standard of the New York Committee was too rigid. Their standard was 'in judging whether or not the death was inevitable.' The criterion has always been that of the best possible skill both in diagnosis and treatment which the community could make available."

For this the Philadelphia Committee substituted a standard used by the courts of law: "A reasonable degree of learning and skill and the use of reasonable care and diligence in the exercise of that skill and application of the learning." This legal standard may be fair in the court of law but, in my opinion, is far below the high standards which the medical profession has always set for itself in such important matters as the life of a young mother. Nevertheless, in spite of this lowered standard, the Philadelphia report shows a preventable mortality of 56.7 per cent.

The resentment with which the Academy report was received by the medical profession gave hope to some of us that something constructive in the reduction of preventable maternal deaths would result.

What has been accomplished since these studies were made?

In any field of endeavor where over half of the accidents were preventable one would expect a marked reduction to follow a study and exposition of the underlying causes. Why is it that no reduction in maternal mortality has followed the above reports? Why is it the recent studies* show that the preventable death rate has remained uniform?

PERTINENT FACTS

1. The reports of large outdoor clinics where nearly all the deliveries are done by students under supervision have always shown a very low maternal mortality, even if all contacts (*i.e.*, cases started by clinics and finished elsewhere) are included.

2. In the Academy report the maternal death rate of cases delivered by the physician at home is 60 per cent below the general mortality rate (Table 82).

3. In many European countries where the standard of living is low, where facilities for prenatal care are almost non-existent and the majority of childbirths are conducted in rural districts where the "unsanitary condition of poverty and ignorance prevail,"† the maternal mortality is much lower than in the United States.

4. The New York midwife has been until recently considered a necessary evil. Of 59 midwives interviewed during our study only 19 were judged to be competent. The great majority of them were ignorant foreigners who never had any scientific training. *Nevertheless,* the maternal mortality in the hands of midwives was only 1.6 per thousand. If every midwife contact is included the mortality is still 2.9 per thousand—40 per cent below the general death rate (Table 83).

DEDUCTIONS

There is an inference of finality in the word "conclusions" which seems to arouse a sense of doubt in the average (skeptical) medical mind. The "Conclusions" of the Academy report aroused a subconscious antagonism in the minds of a great many of my medical friends. It is for this reason I prefer to use the word deductions at the head of this chapter. It permits anyone to differ and draw his own conclusions. What deductions may one draw from the above pertinent facts?

My own deductions are that we have somehow missed the core of the situation, *which is the management of labor.* Prenatal care has been raised to the rank of a fetish. Maternal welfare

organizations, national, state and local health departments throughout the country have expended a tremendous amount of money and effort to make prenatal care universal. That is fine. However, from my personal experience and from a study made by my associates, Doctors A. Tamis and J. Clahr,* I am of the opinion that while prenatal care is extremely useful in avoiding certain obstetrical complications, its importance in the prevention of maternal mortality has been overemphasized.

In my estimation hospital facilities do not affect the outcome of delivery to any great extent. Given a good obstetrical staff, the results will be almost as good in the poorly equipped hospital as in the best.

What is of the greatest importance *is the training, skill, ability and character of the man who delivers the woman.* Permit me to quote again from Dr. T. L. Montgomery's article (p. 746): "There is an improvement in all phases of obstetric practice except those which have to do with labor, and in the latter an increase of over 100 per cent in the responsibility of the physician for sudden death! End result—no change for five years in the preventable maternal death rate; instead a general increase of 11.1 per cent in the proportion of maternal deaths due to errors in judgment and technic on the part of the physician!

"Evidently something is wrong with our methods of management in labor, and saddest to relate, whatever is wrong is going 'more wrong' in every succeeding year."

SUGGESTIONS

It is beyond the scope of a short paper of this character to discuss such an important phase of medical education and medical practice. It is with some hesitation that I presume to point out some ways in which we must attack this problem if we are to make any headway.

1. The practical training in obstetrics which can be given by the medical college to the undergraduate is woefully deficient (confidential statement of several deans of medical schools). Under the circumstances it is the duty of the medical schools to impress upon the young graduate that his practical training in obstetrics has been barely sufficient for the care of the normal case and the recognition of abnormalties, and that no man has a moral right to undertake major obstetrical operations without special postgraduate study and experience.

2. The public must be educated to the fact that forceps and versions require as much skill and training as operations for appendicitis and gall-bladder disease, and that it is unfair to expect the young graduate and general practitioner to be able to take care of most obstetrical complications.

3. "Pertinent facts" seem to point to the fact that in obstetrics unskilled, nay even ignorant conservatism is to be preferred to radicalism in the hands of the average. Let us recognize the fact that all interference with normal labor, whether it be instrumentation, analgesia or anesthesia involve a certain amount of risk to the mother and baby, and should be undertaken only on definite necessary indications by a man specially trained in their management. Teachers of obstetrics must make sure that they do not convey to the students the impression that certain operations or analgesias are perfectly safe, to be undertaken whenever the doctor finds it convenient.

4. The specialty of obstetrics should be carefully standardized, and before recognition the young resident's enthusiasm in his newly acquired skill should be tempered by years of experience.

*Maternal Mortality in the New York City: A Study of All Puerperal Deaths, 1930-1932. Ranson S. Hooker, The Commonwealth Fund, 1933, table 5.

†Maternal Mortality in Philadelphia, 1931-33. Philadelphia County Medical Society Committee on Maternal Welfare, 1934, p. 25.

*Montgomery, T.L.: Am. Jour. Obs. & Gyn., May, 1937, p. 746.

†Wollner, A.: Medical Record, April, 1936.

*Jour. A.M.A., July 17, 1937, p. 195.

COMMUNICABLE DISEASES REPORTED

Urban and Rural - August, 1937.

Occurring in the Municipalities of:

Whooping Cough: Total 200—Winnipeg 118, St. Boniface 36, Unorganized 10, Flin Flon 6, Eriksdale 4, Morton 3, Argyle 2, Brandon 2, Brokenhead 2, St. Clements 2, Woodworth 2, Boissevain 1, Kildonan East 1, Norfolk North 1 (Late Reported: June, Shellmouth 1, Siglunes 1; July, Brooklands 8).

Anterior Poliomyelitis: Total 44—Transcona 7, St. Boniface 5, Swan River Rural 5, Winnipeg 3, Minitonas 3, Portage City 3, Franklin 2, Killarney 2, St. Vital 2, Unorganized 2, Kildonan West 1, Louise 1, Morris Rural 1, Morris Town 1, Pilot Mound 1, Portage Rural 1, Strathcona 1, Swan River Town 1 (Late Reported: June, Swan River 2).

Measles: Total 25—St. Anne 3, Brenda 2, Brandon 1, Cornwallis 1, Daly 1, Hanover 1, Oak Lake 1, Pipestone 1, Shoal Lake Village 1, Springfield 1, Whitehead 1, Whitewater 1, Woodworth 1 (Late Reported: May, Norfolk North 1; July, Rockwood 5, Whitewater 3).

Chickenpox: Total 20—Winnipeg 6, St. James 6, Flin Flon 3, Kildonan East 2, Rivers 1, Swan River Rural 1, Transcona 1.

Scarlet Fever: Total 19—Winnipeg 12, Carman 1, Cartier 1, Fort Garry 1, Teulon 1 (Late Reported: July, Unorganized 3).

Diphtheria: Total 14—Winnipeg 5, Carman 3, Brooklands 2, St. Clements 2 (Late Reported: July, Unorganized 2).

Mumps: Total 11—Winnipeg 8, Ethelbert 1, St. Boniface 1 (Late Reported: July, Harrison 1).

Tuberculosis: Total 7—Winnipeg 7.

Erysipelas: Total 4—Winnipeg 4.

Influenza: Total 3—(Late Reported: January, Woodlands 1; May, Mossey River 1; June, Rockwood 1).

Typhoid Fever: Total 2—Cypress North 1, Thompson 1.

Cerebrospinal Meningitis: Total 1—Winnipeg 1.

Ophthalmia Neonatorum: Total 1—Springfield 1.

Puerperal Fever: Total 1—Winnipeg 1.

German Measles: Total 1—Brandon 1.

Diphtheria Carriers: Total 1—Winnipeg 1.

Venereal Disease: Total 139—Gonorrhoea 91, Syphilis 48.

DEATHS FROM ALL CAUSES IN MANITOBA
For the Month of July, 1937.

URBAN—Cancer 26, Tuberculosis 8, Pneumonia 3, Syphilis 2, Infantile Paralysis 1, Influenza 1, Puerperal Septicaemia 1, Typhoid Fever 1, all others under 1 year 2, all other causes 132, Stillbirths 5. Total 182.

RURAL—Cancer 24, Tuberculosis 11, Pneumonia 7, Syphilis 2, Lethargic Encephalitis 1, Whooping Cough 1, all others under 1 year 6, all other causes 117, Stillbirths 13. Total 182.

INDIAN—Tuberculosis 6, Pneumonia 4, Whooping Cough 1, Cancer 1, all others under 1 year 2, all other causes 4, Stillbirths 1. Total 19.

CANADA YEAR BOOK, 1937

The 1937 Canada Year Book extends to over 1,100 pages, dealing with all phases of the national life and more especially with those susceptible of statistical measurement.

The Canada Year Book is the official statistical annual of the country and contains a thoroughly up-to-date account of the natural resources of the Dominion and their development, the history of the country, its institutions, its demography, the different branches of production, trade, transportation, finance, education, etc.

This new edition has been thoroughly revised throughout.

Persons requiring the Year Book may obtain it from the King's Printer, Ottawa, as long as the supply lasts, at the price of \$1.50, which covers merely the cost of paper, printing and binding. By a special concession, a limited number of paper-bound copies have been set aside for ministers of religion, bona fide students and school teachers, who may obtain copies at the nominal price of 50 cents each.

Medical Library University of Manitoba

Current Medical Literature

"The Lancet"—March 27, 1937.

"The Experimental Outlook in Surgery"—by Sir David Wilkie, M.D., F.R.C.S., Professor of Surgery, University of Edinburgh.

"The Blood Pressure in the Years Following Recovery From Coronary Thrombosis"—by J. H. Palmer, M.D., McGill, M.R.C.P., Lond., Associate in Medicine, Royal Victoria Hospital, Montreal, Canada. (From the Cardiac Department of the London Hospital).

"Acute Diffuse Non-Suppurative Encephalitis: Two Cases Described"—by R. Lawford Knaggs, Consulting Surgeon, Leeds General Infirmary.

"Hypoglycaemic Shock in the Treatment of Schizophrenia: Interim Report on Cases Treated at St. Bernard's (Formerly Hanwell) Hospital for Mental and Nervous Diseases"—by Leonard W. Russell, M.B., Ch.B., Leeds, D.P.M., Assistant Medical Officer at St. Bernard's Hospital.

"Sciatic Scoliosis"—by E. N. Wardle, M.Ch., Orth., Liverp., F.R.C.S., Eng., Orthopaedic Surgeon to the Birkenhead and the Bootle General Hospitals.

"The Early Bacteriological Diagnosis of Diphtheria"—by W. P. Cargill, B.Sc., M.B., Manch., Senior Assistant Medical Officer to the Ladywell Sanatorium and Isolation Hospital, Salford, Lancs.; and G. J. Crawford, B.Sc., M.D., Belf., M.R.C.P., Lond., City Pathologist, Salford, Lancs.

"The Practitioner"—May, 1937.

"The Treatment of a Case of Hypertensive Heart Disease"—by W. T. Ritchie, O.B.E., M.D., P.R.C.P.E., Professor of Medicine and of Clinical Medicine, Edinburgh University, Physician, Royal Infirmary, Edinburgh.

"The Treatment of a Case of Angina Pectoris"—by John Hay, M.D., F.R.C.P., D.L., Emeritus Professor of Medicine, Liverpool University; Consulting Physician, Liverpool Royal Infirmary; Visiting Physician, City Hospital, Walton.

"The Treatment of a Case of Thyrotoxic Heart Disease"—by Thomas F. Cotton, M.D., C.M., F.R.C.P., Physician, National Hopsital for Diseases of the Heart.

"The Treatment of a Case of Congenital Heart Disease"—by Charles Harris, M.D., F.R.C.P., Physician, Children's Department, St. Bartholomew's Hospital, and the Infants' Hospital, Vincent Square.

"The Treatment of a Case of Syphilitic Heart Disease"—by Geoffrey Bourne, M.D., F.R.C.P., Physician, with charge of Out-Patients, and in Charge of the Cardiographic Department, St. Bartholomew's Hospital.

"The Treatment of a Case of Rheumatic Heart Disease"—by Basil Parsons-Smith, M.D., F.R.C.P., Physician, National Hospital for Diseases of the Heart.

"On the Value of the Electrocardiogram in General Practice"—by Adolf Schott, M.D. (Heidelberg), M.R.C.S., Clinical Assistant, Guy's Hospital.

"The Use of Insulin in Non-Diabetic Malnutrition: With Special Reference to Pulmonary Tuberculosis"—by Philip Ellman, M.D., M.R.C.P., Consultant Physician, Tuberculosis and Chest Clinic and Harts Sanatorium, County Borough of East Ham; Consultant Physician, St. Stephen's Hospital (Rheumatic Unit), London County Council.

"The Treatment of Gonorrhoea and Its Complications" —by Harold Dodd, M.Ch., F.R.C.S., Surgeon, King George Hospital, Ilford, and Royal Hospital, Richmond.

"Clinical Indications for the Use of the Specific Hormone of the Corpus Luteum"—by C. Clauberg, M.D., Königsberg.

"The British Medical Journal"—March 20, 1937.

"Medicinal Kaolin in Food Poisoning: A Critical Survey"—by N. Mutch, M.D., F.R.C.P., Physician, Guy's Hospital; Lecturer and Examiner in Pharmacology, London University.

"Infectious Mononucleosis (Glandular Fever) And Monocytic Leukaemia"—by M.C.G., Israels, M.D., M.Sc., Assistant Director in the Department of Clinical Investigations and Research, University and Royal Infirmary, Manchester.

"Terminal Caseating Tuberculous Bronchopneumonia: In Which the Date of Onset was Known"—by C. E. H. Turner, M.R.C.S., L.R.C.P., Assistant Medical Officer, South Yorkshire Mental Hospital; Late Assistant, Bernhard Baron Institute of Pathology, London Hospital.

"Carcinoma of the Bronchus in a Boy Aged 19"—by J. Gordon Hailwood, M.D., Late Medical Registrar, Liverpool Royal Infirmary.

"Industrial Aspect of Fractures of the Os Calcis"—by Bryan McFarland, M.D., F.R.C.S., Ed.

"Three Separate Causes of Antepartum Haemorrhage Occurring Simultaneously"—by Philip J. Ganner, M.B., B.S., F.R.C.S., Honorary Obstetric Surgeon, Birmingham Maternity Hospital; Tutor in Obstetrics and Gynaecology, University of Birmingham.

"The British Medical Journal"—March 27, 1937.

"Effect on the Eye of Radium Used for Treatment of Malignant Disease in the Neighbourhood"—by Philippa Martin, M.S., F.R.C.S., Ophthalmic Surgeon Hospital for Epilepsy and Paralysis, Maida Vale; Assistant Surgeon, Western Ophthalmic Hospital.

"Isolation of the Influenza Virus and the Relation of Antibodies to Infection and Immunity: The Manchester Influenza Epidemic of 1937"—by Leslie Hoyle, M.B., Ch.B., Royce Research Fellow; and R. W. Fairbrother, D.Sc., M.D., M.R.C.P., Lecturer in Bacteriology. (From the Department of Bacteriology and Preventive Medicine, University of Manchester).

"Continuous Open Air for Pneumonia in Children"—by H. L. Wallace, M.B., F.R.C.P., Ed., Assistant Physician, Royal Edinburgh Hospital for Sick Children; Lecturer in Child Life and Health, University of Edinburgh.

"Auditory Nerve Section in Ménière's Disease"—by R. Rutherford, F.R.C.S.

"A Note on the Adrenal Cortex"—by L. R. Broster, D.M., M.Ch., F.R.C.S., Surgeon to Charing Cross Hospital; and H. W. C. Vines, M.A., M.D., Pathologist, Charing Cross Hospital Institute of Pathology.

"The Lancet"—March 20, 1937.

"Heart Disease with Normal Rhythm Complcating Pregnancy"—a Series of One Hundred Cases—by Kenneth Harris, M.D., Camb., F.R.C.P., Lond., Physician to University College Hospital.

"The Chemotherapy of Typhoid and Some other Non-Streptococcal Infections in Mice"—by G. A. H. Buttle, M.A., Camb., M.R.C.S., Eng.; H. J. Parish, M.D., M.R.C.P., Edin.; Morag McLeod, B.Sc., Edin.; and Dora Stephenson, Ph.D., Leeds. (From the Wellcome Physiological Research Laboratories).

"The Effect of Compressed-Air Baths Upon the Vital Capacity in Emphysema"—by G. E. Beaumont, D.M., Oxon., F.R.C.P., Lond., Physician to the Middlesex Hospital, London, and to the Brompton Hospital; and J. F. Dow, M.B., Camb., Late House Physician to the Brompton Hospital.

"Encephalitis in Measles"—Report of Five Cases with one Death and one Recovery after Convalescent Measles-Encephalitis Serum—by G. A. E. Barnes, M.R.C.S., Eng., Temporary Assistant Medical Officer; J. C. Blake, M.B., Lond., D.P.H., Deputy Medical Superintendent; J. C. Hogarth, M.B., Glasg., Assistant Medical Officer; and M. Mitman, M.D., M.R.C.P., Lond., D.P.H., Medical Superintendent of the Eastern (L.C.C.) Hospital.

"Tumour Growth in Hypophyseal Dwarfism"—by Prof. Bernhard Zondek, M.D. (From the Gynaecological and Obstetrical Department of the Rothschild-Hadassah Hospital, Jerusalem).

"Solitary Metastasis in Spleen in Carcinoma Simplex of Right Breast: With Extensive Local Spread" —by W. H. McMenemey, D.M., Oxon., M.R.C.P., Lond., D.P.M., Pathologist to the Napsbury and Shenley Hospitals, Hon. Assistant Pathologist to the West End Hospital for Diseases of the Nervous System, London.

"The Phonostethograph: A New Method of Recording and Reproducing Sounds Heard on Auscultation" —by C. Vaughan Henriques, M.R.C.S., Eng. (From the Electrical Research Laboratory, King's College Hospital Medical School, London).

"The Clinical Journal"—July, 1937.

"Sciatica and Lumbago"—by Sir William Willcox, K.C.I.E., C.B., C.M.G., M.D., F.R.C.P., Consulting Physician, St. Mary's Hospital.

"Observations on Agranulocytosis"—by John F. Wilkinson, M.D., M.Sc., Ph.D., F.R.C.P., F.I.C., Hon. Physician and Director of Clinical Investigations and Research, University and Royal Infirmary, Manchester; Hon. Haematologist, Holt Radium Institute and Christie Cancer Hospital, Manchester, and M. C. G. Israels, M.D., M.Sc., Assistant Director, Department of Clinical Investigations and Research, University and Royal Infirmary, Manchester.

"Cardiac Emergencies"—by T. Jenner Hoskin, M.D., F.R.C.P., Physician and Cardiologist, Royal Free Hospital.

"Recent Advances in Anaesthesia, and Their Application to General Practice"—by C. J. Massey Dawkins, M.A., M.D., D.A., Anaesthetist to the Dental Department, Middlesex Hospital; Anaesthetist to Hampstead General Hospital, etc.

"The Diagnosis of Prostatic Enlargement"—by Stephen Power, M.S., F.R.C.S., Consulting Surgeon, Eltham and Nottingham Hospital; Assistant Surgeon, London Homoeopathic Hospital.

"Without Comment"—by William Hunter, M.D., M.C.O.G., Hon. Assistant Obstetrician, Princess Mary Maternity Hospital, Newcastle-on-Tyne.

"The Canadian Medical Association Journal"—July, 1937.

"A Case of Subacute Bacterial Endocarditis with Brain Abscess"—by D. L. Mendel, M.D.; and Maurice Saibil, M.D., Montreal.

"Leukaemoid Blood Picture in Tuberculosis"—by Edward S. Mills and Stuart R. Townsend, Montreal.

"Study of an Epidemic of Ringworm of the Extremities in an Orphan's Home"—by B. Usher, M.D.; and D. S. Mitchell, M.D., Montreal.